Minutes
Oyster Creek TMDL Steering Committee
September 11, 2003

Stakeholders Present: Al Abramczyk, Tricia Bradbury, Howard Christian, Warren Davis, John Ellis (replacement for Joe Taylor), John Gaudin, Millie Holifield (replacement for Lee Dorger), Raymond Macek (replacement for David Sauer), Martha Martin, David Jalowy, Lisa Rogers

Stakeholders Absent: None

Others Present: None

Support Staff: TCEQ— John Gillen, Jody Henneke, Jason Leifester, Faye Lui; TIAER—Larry Hauck, Heather Jones; Parsons Engineering—Kirk Dean

Administrative Issues

The meeting of the Upper Oyster Creek Dissolved Oxygen and Bacteria TMDL Watershed Steering Committee met Thursday, September 11th from 1:30-4:30 pm at the City of Sugar Land's Eldridge Park facility in Sugar Land, Texas. Larry Hauck, TIAER, opened the meeting and self-introductions were made. The committee then approved both the groundrules and the minutes from the June 12th meeting.

TMDL Refresher and Dissolved Oxygen Update

Larry Hauck, TIAER, gave a short review of the TMDL process, the stakeholder's role, and provided information on the specifics of why Oyster Creek is considered impacted (all of which were presented and discussed in more detail at the meeting held June 12th, 2003).

To evaluate the aquatic life use designation dissolved oxygen (DO) criteria are used. Year one of the project's 24-hour DO sampling has been completed. Dissolved oxygen results were presented for the sampling events of February, May, June, July and August 2003. Based on the results, months identified with DO issues were May, June, and August. DO assessment monitoring will continue through August 2004.

Bacteria Update

Larry Hauck, TIAER, presented information on *E. coli* and the specific criteria that are used to measure whether the contact recreation use water quality standard is being met. *E. coli* data results from monitoring events occurring from October 2002 to August 2003 were presented. A majority of the sampling sites exceeded the geometric mean of 126 cfu/100ml and the single sample limit of 394 cfu/100 ml during the sampling period. The difficulties measuring flow at the sampling sites due to the depth and width of the creek was discussed. Data results from tributaries indicate that high levels of *E. coli* are often associated with the high streamflows associated with storm events. In contrast the low levels of bacteria observed in the lakes, which are part of the Oyster Creek system, are

thought to result from settling in the slower moving water in the lakes. A request was made for data that associated the correlation between bacteria and rainfall. TIAER's portion of the bacteria sampling is complete. Parsons Engineering will be responsible for subsequent bacteria monitoring and the bacteria source tracking component during the second year of project monitoring.

Bacteria Source Tracking

Kirk Dean of Parsons presented specifics on bacteria source tracking (BST). Bacteria source tracking will be used to help identify and track the potential sources of bacteria that exist in the Oyster Creek watershed. Bacteria in water bodies can be associated with point sources (sewage treatment, industry) or with nonpoint sources (human—sewer systems; animal—livestock, pets, wildlife). The objectives of the BST component of this project are to 1) differentiate and quantify relative contributions of *E. coli* from human and various non-human sources and 2) acquire local knowledge of geographic origins of *E. coli*. To accomplish these objectives, *E. coli* samples will be collected from the fecal material of potential warm-blooded animal sources in the watershed and intense *E. coli* sampling of the receiving waters of the Oyster Creek will occur beginning late winter 2004 and continue through the summer of 2004. Bacteria are traced using ribotyping or DNA fingerprinting. The resulting ribotypes are matched between a given animal source and the bacteria ribotypes that are found in receiving waters so that the contaminating source can be identified.

The BST sampling that will occur under this project will include the collection of fecal material from potential bacteria sources in the watershed. Approximately 400 samples and 800 isolates (with no more than 10 samples from a species in a single location) will be collected from animal and human sources. Water sampling will consist of 12 different sampling events over a 6-month time frame at 6 sampling stations. Five samples will be taken at each sampling station during each sampling event allowing for a total of 360 samples and 720 isolates. Parsons and TIAER will work together to select the sampling stations for the bacteria monitoring.

Further discussion by the stakeholder group followed the presentation. Stakeholders asked that some of the sampling events occur during rainfall events. Subsequent discussion centered on the outcome of the sampling results and if bacteria problems were found how the problem would be solved. Stakeholder John Gaudin commented that the new NPDES Phase II regulations may help improve storm water runoff water quality.

The stakeholder group developed a list of potential nonpoint source bacteria sources:

1. Ducks (seasonal presence of black-bellied whistling-ducks immediately upstream of Dam #2; other ducks more dispersed throughout the lakes region)
2. Pigs
3. Horses
4. Cows
5. Organic fertilizers (use at plant nurseries in the watershed)
6. Dogs

7. Cats
8. Wildlife (deer, raccoons, opossum)
9. Feral hogs
10. Septic systems (specific areas of concern were noted)
11. Beneficial landuse (sludge applications)
12. Goats
13. Possibly exotic animal species

Stakeholders also provided focused insight on watershed activities using a large, high-resolution aerial photomap.

Stakeholders asked TIAER to provide:
1. Data on the correlation between rainfall and bacteria levels
2. Data on rainfall versus non-rainfall events
3. Data on beneficial landuse (sludge permit applications and disposal areas) in the watershed
4. Map of the six bacteria monitoring station locations to be used for bacteria source tracking

Meeting Wrap-up

A tentative meeting was scheduled for February 2004. E-mail correspondence will be used to determine if stakeholders would like to meet to discuss new DO data and monitoring locations for bacteria source tracking. The meeting was adjourned at approximately 4:30 pm.